

AIR-O-CEL*

VAPOR BARRIER

Reflective

INSULATION BOARD



The only board that combines Reflective Thermal Insulation with a Positive Vapor Barrier

THE

Thermal

PRINCIPLE

DEAD AIR
space acts as a
buffer between
inside and outside
temperatures.

AIR SPACE
WALLS ARE
REFLECTIVE

DEAD AIR
SPACE



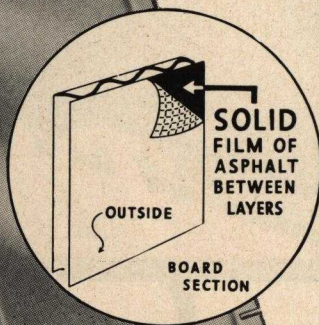
The well-known vacuum bottle—the same as found in father's lunch box—graphically illustrates the thermal principle. Hot or cold liquids poured into the bottle hold their temperatures for hours due to its "dead air" space between inner and outer shells.

"IF IT'S INSULATION...IT'S AIR CELLS"

AIR-O-CEL "Vapor Barrier"

GIVES MAXIMUM INSULATION EFFICIENCY

MOISTURE
BARRIER OF
SOLID ASPHALT

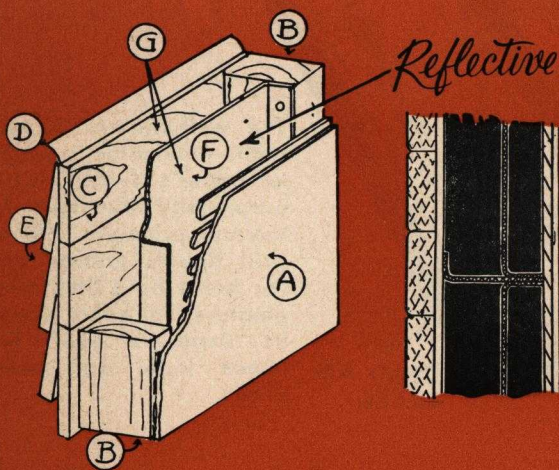


REFLECTS
95%
OF ALL
RADIANT HEAT

SOLID ASPHALT FILM BETWEEN LAYERS PROVIDES A POSITIVE VAPOR BARRIER

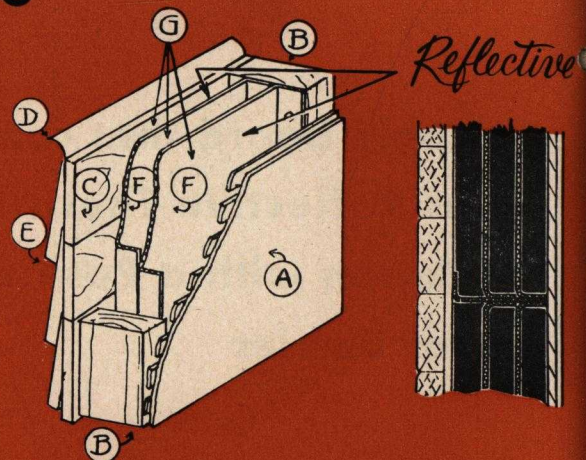
Air-O-Cel Reflective Insulation Board is an asphalt saturated, corrugated board of the wood fiber base type, with a sheet of heavy, highly reflective mineralized surface, laminated to its face. It is the one board that honestly provides a positive vapor barrier—a heavy, solid and unbroken film of asphalt between the asphalt saturated board and the laminated reflective surface. Properly installed, Air-O-Cel board offers the closest to a perfect thermal insulation possible, for it forms a dead air buffer between interior and exterior temperatures—the oldest and only efficient insulation principle known. Combine this feature with Air-O-Cel's positive vapor barrier construction and you have an insulation material that cannot be matched for all around insulation efficiency.

AIR-O-CEL MAKES A THERMAL UNIT OF THE ROOF, WALL OR CEILING



Air-O-Cel Vapor Barrier Reflective Insulation Board when installed between studs, joists or rafters, forms an air tight, thermal pocket of motionless air. Moving air (convection) transfers heat faster. Dead air in the Air-O-Cel thermal pocket retards the heat flow. Reflective surface adds to the efficiency by reflecting 95% of the heat rays—a perfect thermal unit—the same as a vacuum bottle.

- A. Wood Lath and Plaster
- B. Studding
- C. Sheathing
- D. Building Paper
- E. Lap Siding
- F. Air-O-Cel Reflective Insulation Board
- G. Air-O-Cel Thermal Spaces



WALL INSULATED WITH DOUBLE AIR-O-CEL INSTALLATION

Two layers of Air-O-Cel Reflective Insulation Board installed between the walls, gives triple the insulation efficiency with three, always uniform, thermal spaces. With the reflective surface of the outer board facing the exterior and the reflective surface of the inner board facing the interior, top efficiency is gained for both winter and summer insulation.

"GOOD BUILDINGS DESERVE GOOD INSULATION,"

Reflective

INSULATION BOARD

CANNOT SAG, SETTLE, FALL OR SOAK UP MOISTURE

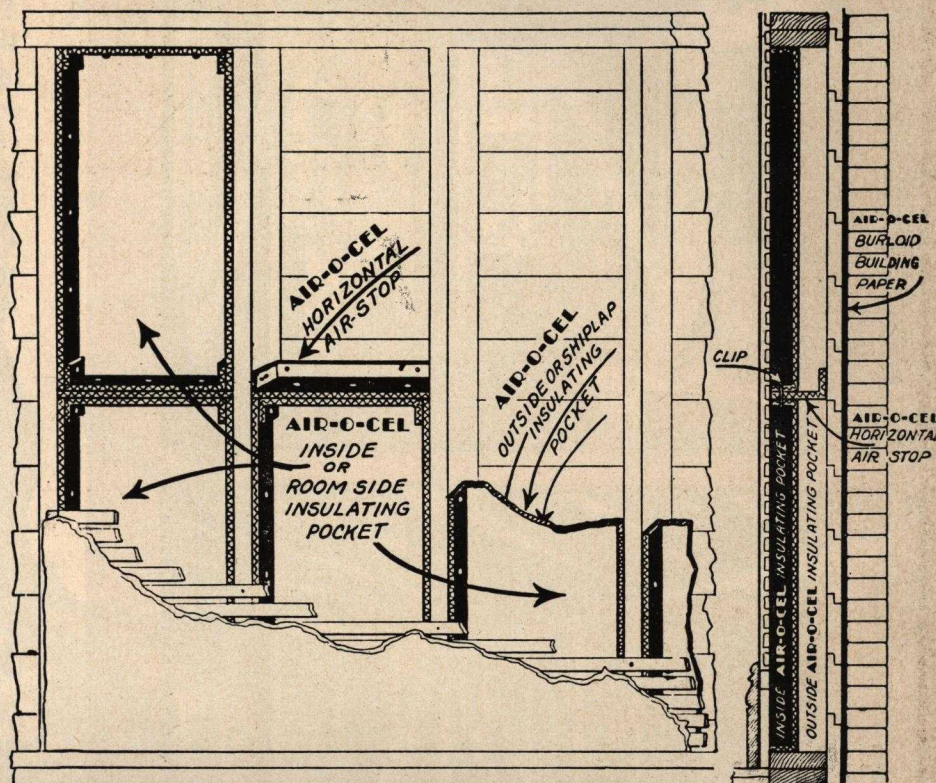
Air-O-Cel Vapor Barrier Reflective Insulation Board is tough, rigid and durable—it cannot settle, sag or fall. Once installed, it stays put and provides the maximum in dependable insulation for the life of the building.

Since Air-O-Cel Reflective Insulation Board is thoroughly saturated with asphalt and carries a solid film of asphalt between its layers, it is a positive moisture resistant—it cannot soak up moisture or lose its rigidity.

ELECTRICAL CONDUCTIVITY is same as DRY wood. Does not affect radio waves.

SURPASSES F. H. A. SPECIFICATION NO. 771

F. H. A. Specification No. 771 calls for a vapor barrier in all frame walls of conventional or similar construction where insulation is added within the stud spaces. Air-O-Cel Backer Board meets and surpasses all requirements of Specification No. 771 by more than 60% (Tappi Method). Write for copy of laboratory reports that prove that fact—There's no obligation.



HEAT LOSS CO-EFFICIENTS

Transmission figures calculated as recommended by 1945 Guide of the American Society of Heating and Ventilating Engineers. Hot plate test by J. C. Peebles of Armour Institute of Technology.

Values expressed in BTU per hour per Sq. Ft. per degree difference in temperature between air on 2 sides outside and velocity 15 Mph.

WALLS

Local-Wood Joists (2' x 6"), Rock Lath Plaster. Reflective surface must face interior.

Insulation	Attic not floored	Attic floored
Thickness AIR-O-CEL Reflective (Single air space) 60% reduction in rate of heat flow	.61	.28
Thickness AIR-O-CEL Reflective (Double air space)	.13	.10
Thickness AIR-O-CEL Reflective (Triple air space)	.07	.06

CEILING

Local-Wood Sheathing (2' x 4") Studs, Rock Lath, Plaster. Reflective surface must face interior.

Exterior Wall	Wood Siding	Wood Shingle	Stucco	Brick
Insulation	.25	.25	.30	.29
Thickness AIR-O-CEL Reflective (Double air space) 70% reduction	.10	.10	.12	.11
Thickness AIR-O-CEL Reflective (Triple air space)	.07	.07	.08	.08

FLOORS

Local-Wood Rafters (2' x 6"), Rock Lath, Plaster Ceiling. Lower Side. Reflective surface must face roof boards.

Insulation	Wood Shingles or wood roof board	Asphalt or roll roofing on solid wood roof board
Thickness AIR-O-CEL Reflective (Double air space)	.29	.31
Thickness AIR-O-CEL Reflective (Triple air space)	.11	.12

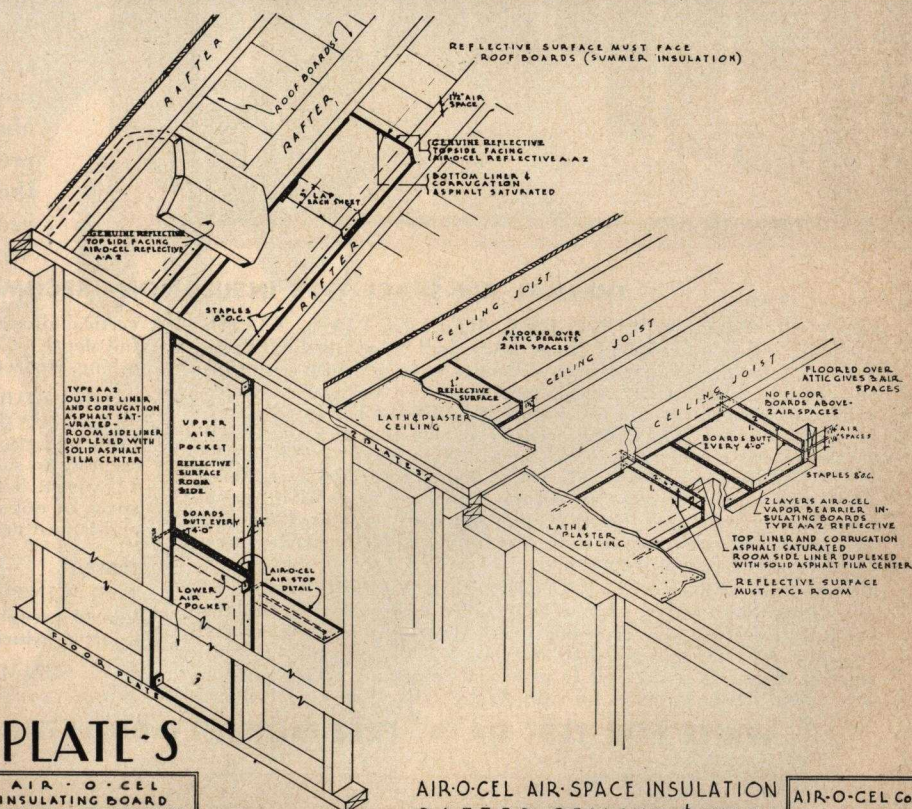


PLATE-S

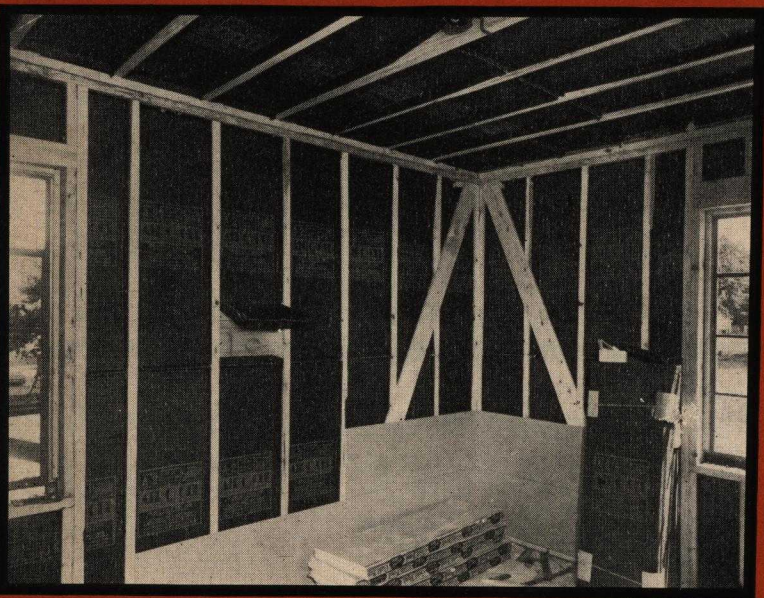
AIR-O-CEL INSULATING BOARD APPLICATION PROTECTED BY U.S. PATENT NO. 1924515 CANADIAN PATENT NO. 511466

AIR-O-CEL AIR-SPACE INSULATION RAFTER-CEILING & WALL INSTALLATION DETAIL

AIR-O-CEL Co. DETROIT-20 MICH.

GOOD INSULATION IS AIR CELLS"

AIR-O-CEL "VAPOR-BARRIER" *Reflective* INSULATION BOARD



QUICK and EASY TO INSTALL

Air-O-Cel Vapor Barrier Reflective Insulation Board is shipped from the factory, in easy to handle sheets, pre-cut to fit between all standard studding, joists or rafters. Board can be easily cut with a linoleum knife for installation in off-standard areas. Board may be fastened in place with flat headed rock lath or roofing nails. Wire staples and stapling machines may be used for speedier installation. Air-O-Cel Reflective Board is simple to install. High priced labor is not needed.

SIZES

17" x 51" flanged and slotted—25 sheets—150 sq. ft. wrapped:—16" O. C. and under.

25" x 51" flanged and slotted—25 sheets—225 sq. ft. wrapped:—24" O. C. and under

36" x 48"—flat sheets—25 sheets—300 sq. ft.

Special Sizes Available

SOLID MASONRY and BLOCK WALLS

Air-O-Cel Vapor Barrier Reflective Insulation Board applied against a masonry or block wall with the reflective surface facing the interior reduces the high heat flow by 60% and stops moisture penetration. Furring strips applied over the Air-O-Cel board, holds it permanently in place and provides an air space between the lath and the reflective surface of the board. The asphalt film between the layers of the Air-O-Cel board provides a positive vapor barrier and damp-proofs the wall. Air-O-Cel Board is applied by the carpenter.

THERMAL AIR-SPACE TYPE INSULATION—RECOMMENDED SPECIFICATIONS

EXTERIOR WALLS • AIR-O-CEL REFLECTIVE VAPOR-BARRIER Insulating Board (Type AA2) shall be installed in exterior walls with flanges bent and edge of flanges to be set flush with inner line of studs. AIR-O-CEL air stops to be installed at line of horizontal flange, dividing upper and lower sections. AIR-O-CEL air-stop to be full depth of stud. Nail flanges securely to side of stud with $\frac{1}{2}$ " wire staples placed not more than 18" apart. Beam fill with AIR-O-CEL AA2 REFLECTIVE Board between all floors exposed to heated area. All exterior walls adjacent to occupied quarters shall be insulated. Fill all irregular interstices with Wool, particularly around all windows and doors, between rough opening and frame. Reflective surface must face interior of occupied quarters.

CEILINGS • AIR-O-CEL REFLECTIVE VAPOR-BARRIER Insulating Board (Type AA2) to be installed with outer edge of flange flush with bottom edge of ceiling joist. Abutting side of flange shall be tight. All ceilings exposed to attic space shall be insulated. When portion of ceiling is exposed to attic and remaining ceiling portions are under finished rooms provide AIR-O-CEL Vapor-Seal Board,

vertical air stop set on a line with walls of rooms above and being the full depth of the joist. Ceiling cut-off or slope to be considered as ceiling. Reflective surface to face room of occupied quarters.

RAFTERS • All roof areas to be covered with AIR-O-CEL REFLECTIVE VAPOR-BARRIER Board (Type AA2). The board shall be installed between rafters with flanges bent and side of flange stapled securely to side of rafter with $\frac{1}{2}$ " wire staples placed not more than 12" apart. The reflective surface shall face roof board with an air space of not more than $1\frac{1}{2}$ " from roof boards. The board shall be end-lapped not less than 6".

NOTE:

FOR WINTER INSULATION: Reflective surface to face room of heated occupied quarters: as close as possible to point of occupied quarters which are heated.

FOR SUMMER INSULATION: Reflective surface to face roof boards: as close as possible to point of entry.

WRITE FOR TEST DATA, FREE MONTHLY BULLETIN and other FREE INFORMATION

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